

# CITIZENS' WATER ADVISORY COMMITTEE (CWAC)

## Technical/Planning and Policy Subcommittee

Wednesday, January 27, 2016, 12:00 p.m.

Director's Conference Room

Tucson Water, 3<sup>rd</sup> Floor

310 W. Alameda Street, Tucson, Arizona



## Summary Minutes

### 1. Roll Call/Call to Order

The meeting was called to order by Subcommittee Chair Mark Murphy, at 12:08 p.m. Those present and absent were:

#### Present:

Mark Murphy	Chairperson-Representative, Mayor
Mitch Basefsky	Representative, City Manager
Chuck Freitas	Representative, City Manager
Kelly Lee	Representative, Ward 6

#### Absent:

Brian Wong	Representative, City Manager
Placido dos Santos	Representative, City Manager

#### Tucson Water Staff Present:

Britt Klein	Water Administrator
Wally Wilson	Chief Hydrologist
Fernando Molina	Water Program Superintendent
Johanna Hernandez	Staff Assistant

#### Others Present:

Marc Campbell	SRP
Bud Foster	KOLD
Brian Bennett	KOLD
Paul Durrant	KOLD

### 2. Announcements – No action taken.

### 3. Call to Audience – No action taken.

### 4. Review & Approval of October 28, 2015 Legal Action Report and Meeting Minutes –

Member Freitas motioned to approve the Legal Action Report and Meeting Minutes of October 28, 2015. Member Basefsky seconded. Motion passed unanimously by a voice-vote of 4-0.

### 5. Approval of 2016 Meeting Schedule –

The Subcommittee considered the 2016 meeting schedule and decided not to make any changes to the current meeting schedule. Brief discussion was held on items

### 6. Subsidence in Tucson and Avra Basins –

Tucson Water staff Wally Wilson presented a PowerPoint on subsidence mapping in the Tucson and Avra Valley groundwater basins. The general goal is to stop subsidence, though occasionally reversing subsidence can be achieved. The USGS has been monitoring subsidence since 1987 using vertical compaction GPS surveys, and extensometer data, both of which are physical installments. In 1993, ADWR began using InSAR data to map subsidence, which is then validated by the USGS methods. InSAR is

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essentially a series of satellites that utilize side scan radar in passes around the Earth, where subsequent passes are compared to earlier passes. The InSAR data up to 2015 reflect the rate of change reflecting subsidence is diminishing drastically. A USGS report spanning 1987-2005 includes GPS survey data that reflects actual subsidence change is less than 5 inches. The same USGS report includes extensometer data reflect that increasing water tables are significantly mitigating subsidence in certain areas (Marana, SAVSARP) and even resulted in some rebound. Some areas in the center of the City are not seeing as much mitigation of subsidence and compaction can be seen up to 6 inches. Renewable water supplies have significantly mitigated subsidence in the Tucson and Avra Valley groundwater basins through strategic recharge and pumping. While Tucson Water will be increasing pumpage in Pima Mine Road, the water levels in the area are rising so quickly that pumpage will not cause subsidence.

7. **Arizona's Desalination Efforts** – Marc Campbell, with the Salt River Project (SRP), presented a PowerPoint presentation on Seawater Desalination in Arizona. SRP's desalination project is a joint project with DWR and CAP. Desalination is important because additional renewable water resources are necessary to support additional population growth and economic development. Ocean water comprises 97.5% of water, and makes up the largest source of renewable water. Desalination costs are decreasing over time from \$9.50 per 1K gallons to just under \$3 per 1K gallons of water. A large part of the costs are associated with litigation related to desalination. The Middle East leads in desalination capacity. The US is just behind in capacity with 1200 desalination plants, comprised mostly of small-scale brackish treatment plants. Thermal distillation and membrane methods of desalination were reviewed, and emerging technologies were discussed. The Carlsbad Desalination plant was reviewed for an example. Desalination plants have an estimated 50-60 year lifespan, with the opportunity to upgrade/retrofit to extend the life of plants; plants can expect 60-70% fresh water recovery. Desalination projects have to be regional to account for the cost. Arizona's best options are to partner with California or with Mexico. Taking into consideration the scale, the legal aspects, and funding, a partnership with Mexico may present the best opportunity. A study and scenario of a possible desalination project in Rocky Point was reviewed. Currently, discussions of options for desalination are being held at the federal level. Some consideration for the area are brine disposal and effects to endangered species. If Arizona started today, it would still be 20 years before a large-scale plant is operational.
8. **Future Meetings/Agenda Items** – See projected agenda for further information.
9. **Adjournment** – Meeting adjourned at 1:16 p.m.

**Approved 2/24/16**